

September 14, 1925.

Dear Robert,

Well I wish that you were here. Doan came last Thursday and is as enthusiastic as I am which is saying a lot as you know me. We are getting our laboratory equipped this week and talking over plans for work so that we can begin next week.

Doan is at the Shelton, 49th and Lexington, a very attractive hotel which was built originally especially for men and so is particularly comfortable. They take women now as well so Doan invited me to a dinner at the Cafeteria which is out of doors on the 16th floor just half way up. There is a gymnasium and a swimming pool and every kind of a rest room you can think of, cards, pool, sun room etc. My place is not so swell. I have three rooms, a living and dining room combined, kitchen, bed room and bath. I wanted more room, one more bed room for guests but it would have been at the expense of living all the time with no sun and with no outlook except walls and my neighbors washing so I chose the sunlight for all the year around. Doan is to get you a place at the Shelton when you come to New York, which we are hoping is going to be surely every year as you promised. After October my home address will be 151 East 80th Street, but send all mail here at the Institute.

Now about work. Dr. Flexner came back this morning, looking very rested. I haven't had any chance to talk about work yet but did break to him the idea that I wanted to do a little with tuberculosis, to which he agreed, without knowing the plan. The proof of the new Chart 12 came this morning and is fine. I would like to keep it a few days until I have had a chance to show it to Dr. Flexner and will then send the whole thing to you, that is the whole duplicate set of proofs of the charts which I now hold. I am to go to Baltimore Friday night of this week and have written to MacGruder to try to have the proof of the colored plates ready for me that day. Then I have written to Miss Stocksdales to try to have the page proof ready for me, then I could be sure that the page references are straight. With only Miss Stocksdales to read the page proof I feel a little leary about it and so am going to insist on seeing it myself.

Doan has called my attention to McJunkin's paper on The origin of the mononuclear phagocytes of peritoneal exudates, Amer. Jour. of Path., 1925, 1, 305-324. It is the first volume of the reorganized Journal of Medical Research, and if you haven't got it you ought to send for a reprint. He wrote his paper evidently on the basis of those of ours in the Society of Medicine and Biology and then to his discomfort saw our three in the Carnegie Contributions, before he published. The effect is a little amusing. He described three types of phagocytic mononuclears, a hyaline, a rosette and a non-rosette. The rosette type by which he means our monocyte of course is plain enough but he does not give enough for us to be sure just what he does mean. We rather think that he has young and old clasmotocytes on his mind. However his chief point is that it is especially the lymph glands, and in particular the sinuses of the lymph glands that give rise to his rosette types. You see he is intent on the endothelial origin, so for the clasmotocyte he says vascular endothelium and for the rosette types the lymphatic endothelium. His evidence is this; he injects a saturated solution of neutral red into a lymph gland fixes the tissue, cuts sections with a technique that avoids alcohol, stains with methylene blue and finds that there are many cells in the sinuses that show rosettes,

He finds that only a few of the nuclei have stained with the neutral red and he regards those as the few that have been damaged by the stain. All that is puzzling to me because I am very sure that every single cells must have been killed by the stain. Of course he comments on our not finding the rosette forms in the lymph glands. I think that our observations of last year on the origin of the monocytes every where in the tissues are very sound and controvert the idea of an origin of them from the lymphatic endothelium. At any rate, Doan and I both feel as I remember that you did that our studies of lymph glands were very incomplete so the first step on our program is to make many punctures of normal lymph glands and become much more familiar with the variations in the lymph gland punctures than we now are. This we plan to do with the idea of testing out McKim's idea of the origin of the monocytes. To that end we thought that we would study tubercular lymph glands in the same way, by our technique and also by repeating his. In connection with this work we shall keep closely in touch with Kindwall to see just what he gets from the thoracic duct. I am very eager about that end of it.

The second idea I have in connection with tuberculosis is this. I hear that goats are immune to tuberculosis. I am going to find if that is really true and study the monocytes in goats blood, say goats blood in tissue culture with reference to tuberculosis. It is that that I want to consult Dr. White about in case it is really true.

Our third plan is the general tissue culture of the blood with reference to the anti-monocytes serum that we talked about last year.

The next, is an idea you will find in the paper that a further check on the clasmatocyte-monocyte idea could be made by getting tubercular lungs such as we had last year in chronically stained rabbits i.e. chronically stained with trypan blue. In some of the rabbits lungs I did not see any clasmatocytes, so I think that point should be followed up. The more I think of it the more sure I am that your clasmatocyte-monocyte discovery is really important. I think that it is sound but that we must subject it to more tests.

Then of course we plan to go on with Doan's gelatinous marrow and he has gotten his biological matching of leucocytes well under way and all ready for further work.

I think that it was in McKim's paper that there was a reference to the fact that in Guinea pigs blood there were very conspicuous Kurloff bodies in the lymphocytes. You remember that those things we called parasites were we finally decided in the lymphocytes not in the monocytes. I wonder if he is right that they are Kurloff bodies. I have the vaguest memories about Kurloff bodies and thought that they were fragments of nuclei, and at any rate those bodies in the guinea pigs blood were certainly not of nuclear origin. Let us know when you have read McKim's paper what you think his three types of nonnuclear cells are.

The next item in this long letter is Sugiyama. I think that I wrote to you that he handed in a very long paper including much that was old, or in my first paper in the Mall Memorial Volume and then his two new points all written as if it was all new. Dr. Streeter was glad to take his work and publish it provided it was new, so I went over the whole thing with him and asked him to write two short papers on his two points. He has just written to me that he is so discouraged that he wants to put the whole thing off. I have answered that I shall be in Baltimore next Saturday and that we can talk it all over, then I have asked him to let me bring the paper up here and work on it a little myself. His two points are, first that those clumps of thrombocytes come from the megakaryoblasts that is from endothelium; second that the clasmatocytes that come outside the vessels are directly from mesenchyme not from endothelium on the score that the extravascular clumps

of cells in the chicks 4 to 5 days old do not stain with the neutral red as much as the endothelium itself. I think it a good point, the very thing that I wanted studied. He may be right and I think that we want every possible test of the clasmatocyte-monocyte idea, functional as well as embryological. I shall try to get his paper and may be able to send you a copy. He has only one good copy, so I think that I shall try to get a copy made here, and send him back the original.

Do let us know your plans for work, how the start is made in the teaching, whether you have found a house or not and every other bit of news.

In regard to the checks for your two students at Nashville, we worked out a system this summer which ought to work fairly promptly. I have a voucher book and make out the order and tear off one half to send to Mrs. Swan. She makes out the checks to the student and sends it to him in care of the instructor with whom he is working. In that way you will know when the check comes. The voucher books came to-day, the papers are all in my room so I can't send them off until to-morrow but they should get to Denver this week and be sent off next week from Denver. The delays will come from two sources, first if Mrs. Swan happens to be away and secondly the funds are kept pretty well invested and the plan is to sell securities when necessary. That may always take a few days.

Hope this won't be too long to read,

Very cordially yours,